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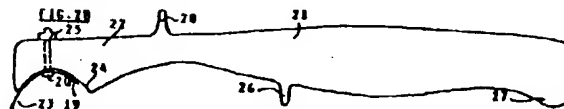
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①④ Tool for removing material from surfaces.

①⑤ The invention relates to a tool for removing material such as wallpaper and paint from a surface, comprising a holder (22) with a knife or scraper (23) that may be exchangeable and a handle (21), whereby the handle or the holder is provided with one or more supports (26, 28) for providing a satisfactory grip of the tool.



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Tool for removing material.

The invention relates to a tool for removing material, for example, wallpaper and paint from a substrate, comprising a holder having a knife, or scraper that may be exchangeable and a handle.

5 The tools, used nowadays, for removing material, such as wallpaper from a wall or a ceiling, paint from doors, cupboards and other objects or for removing cement residues from floors, usually consist of a priming knife or an ordinary knife. Apart from the difficulties involved in removing such materials with this kind of tool, this tool has the disadvantage that it may cause injuries due to more or less unskilled  
10 use, since the knife may slip by unexpected movements or abrupt disengaging of material so that the tool gets out of control and may cause a wound. Therefore, a person skilled in the art uses, for example, a steam apparatus for removing wallpaper or a burner for removing paint. With regard to energy such apparatus is often inefficient and cannot be employed  
15 by an amateur without risks.

It is, therefore, desirable to have tools that can be readily handled by both the skilled person and the amateur without practically any risk of injuries, whilst these tools should provide the same results as obtained by the professional tools, for example, a paint burner or a  
20 steam apparatus for removing wallpaper.

This is achieved by the tool according to the invention which is characterized in that the handle is provided with one or more supports

for improving the grip of the tool.

Since the tool according to the invention lies better in the hand and is provided at the desired points with supports, the tool according to the invention permits of exerting heavier forces on the material to be removed, whilst slipping and the like of the tool is minimized.

The invention will be described more fully with reference to the accompanying drawings, which show a few preferred embodiments of tools in accordance with the invention.

10 Fig. 1A-C is a plan view, a side elevation and a bottom view respectively of a paring knife.

Fig. 2A-C is a plan view, a side elevation and a bottom view respectively of a scraper in accordance with the invention.

Fig. 3A-C shows an alternative embodiment of a scraper as shown 15 in Fig. 2.

Fig. 4A-C is a plan view, a side elevation and a bottom view of a scratching tool.

Fig. 1 is a view of a tool for cutting off wallpaper, for removing cement residues on floors or for removing paint bubbles on walls 20 and the like. For easy handling the hand grips around the handle 1 of the tool, between the support 6 and the end of the handle 7. By means of the screws 5 in the recesses 10 the knife 3 can be exchanged so that the tool can be used at low costs, since after a job only the knife needs to be replaced. In order to avoid penetration of the tool, particularly of the knife, into a wall or an object the knife 3 is rounded 25 off at the corners 8. The knife 3 is disposed in an inclined position relative to the holder 2 so that at the beginning of the job for removing material, the material, to be removed, can be more readily worked over a comparatively small width, in which a so-called carving pattern 30 is formed in the material to be removed. At the transition from the handle to the holder stiffening ribs 9 are provided so that with a minimum amount of material the tool has adequate rigidity.

The tools according to the invention may be made from any suitable material such as wood, iron or synthetic resin, but for economic reasons 35 it is preferred to make the major part of the tool from a synthetic

resin and the cutter or scraper form a kind of steel.

Fig. 2 shows a scraping tool with exchangeable knives 23. This tool comprises a handle 21 changing over at the front, where the knife is fixed, in a holder 22 provided with a wing nut 25 for fixing the knife or the scraping member 23 in a cavity 24. The knife or the scraping member 23 may be constructed so that it can be used both at the front and at the rear and be adjusted with the aid of the screw 20 so that by one movement two scrapings are carried out at a height 23 differing from the height 19 with respect to the object or the surface worked on with the tool, as shown in Fig. 2. With the tool shown in Fig. 2 particularly the extensions 26 and 28 are important, since in using this tool the thumb will preferably be put against the extension 28 and the extension 26 will be clamped between the other fingers. Thus the tool can be satisfactorily manipulated. As an alternative the hand may be placed between the extension 26 and the end of the handle at 27 so that the tool shown in Fig. 2 is gripped in the same manner as the tool illustrated in Fig. 1.

Fig. 3 shows a scraping tool comparable with that of Fig. 2, but in an alternative embodiment. The knife 33 is clamped in the holder portion 34 in a gap 35 so that the knife 33 cannot be exchanged. The scraping tool of Fig. 3 is intended for use as a dispenser tool that can be thrown away when its quality has deteriorated to such extent that it can no longer be successfully employed. The handle 31 has a downwardly extending support 36 and an upwardly extending support 38. The supports 36 and 38 are having the same functions, as the supports 26 and 28 of the tool shown in Fig. 2. The handle 31 does not have a bevelled end 37, where the tool 3 is preferably held between the supports 36 and 38.

Fig. 4 shows a scratching tool. The handle 41 and the holder 42, which largely corresponds with the handle and the holder shown in Fig. 2. The handle of Fig. 4 differs from that shown in Fig. 2 in that the tool of Fig. 4 is not provided with an upwardly extending support so that the tool of Fig. 4 is preferably held between the support 46 and the downwardly inclined rear side 47. The scratching member 43 comprises a bent portion 49 and a curved portion 48 terminating at the bent portion 49. The curved portion 48 being located in the curved recess 44 of the holder

42, in which it can be positioned with the aid of a screw 40 and a nut 45. The tapering portion 49 serves for cleaning cracks, for example, in walls so that these cracks can subsequently be successfully filled with a filler. The limbs 49 and 50 are preferably at an angle of  $95^{\circ}$  to  $130^{\circ}$  5 to one another. Although the end 48 of the member 43 may be used for scratching, this is less desirable on account of the nature of this tool, and, therefore, the adjustability of the scratching member is less required in comparison to the scraping member 23 of Fig. 2.

It will be obvious that a number of variants of the tools as 10 described above are possible, for example, by varying the fastening members or by combining tools within the scope of the present invention.

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Claims.

1. A tool for removing material such as wallpaper and paint from a substrate, comprising a holder with a knife or scraper that may be exchangeable and a handle characterized in that the handle or the holder is provided with one or more supports providing a satisfactory  
5 grip of the tool.

2. A tool as claimed in Claim 1 characterized in that approximately midway the handle a downwardly extending support is provided and the handle is bevelled to the rear end at an average angle and over a  
10 length such that the lowermost point at the end is located substantially at the same level as the lowermost point of the support.

3. A tool as claimed in Claims 1 and 2 characterized in that the holder portion or the handle portion is provided with an upwardly extending support, behind which the thumb can be placed at such a distance  
15 from the downwardly extending support that the downwardly extending support can be gripped between the other fingers or in that the distance between the two supports corresponds to the width of a hand.

20 4. A tool as claimed in Claims 1 to 3 for cutting, for example,

wallpaper from walls, cement residues from floors or paint from an object characterized in that the knife projects over substantially the whole width of the holder over a distance of 1 to 10 mms and has rounded-off corners.

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5. A tool as claimed in Claim 4 characterized in that the knife is positioned at an angle of  $5^{\circ}$ - $45^{\circ}$  in comparison to the end of the holder.

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6. A tool as claimed in Claims 1 to 3 characterized in that the scraping member tapers into a tip at an angle of  $95^{\circ}$ - $130^{\circ}$  to the prolongation of the holder terminating in the direction to the downwardly extending support.

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7. A tool as claimed in Claims 1 to 3 characterized in that the scraping member projects like a knife over a height of 5-15 mms substantially across the whole width of the holder.

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8. A tool as claimed in Claims 6 and 7 characterized in that the scraping or scratching member has a round portion by means of which it is exchangeably fitted in a round recess in order to obtain firm clamping.

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9. A tool as claimed in claims 7 and 8 characterized in that the knife or scraping member is designed so and is adjustable in such a manner that by one movement of the tool two scrapings can be performed since the heights of the ends of the member slightly differ from one another.

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FIG. 1A

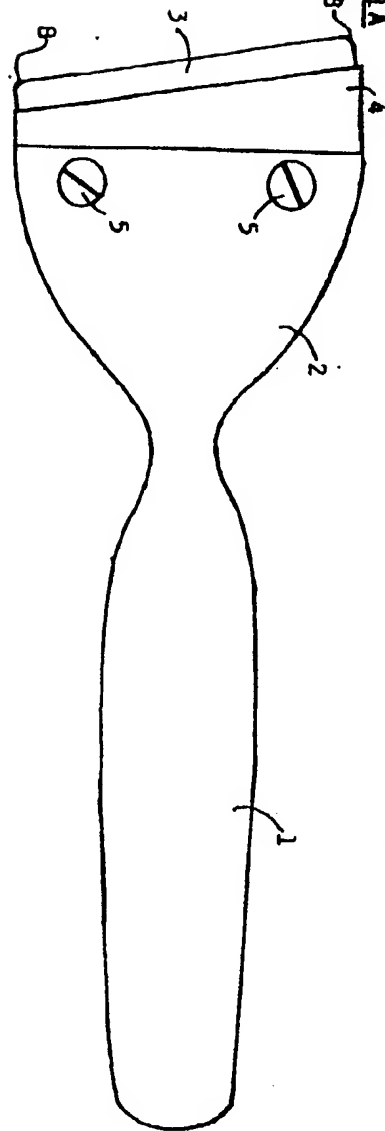


FIG. 1B

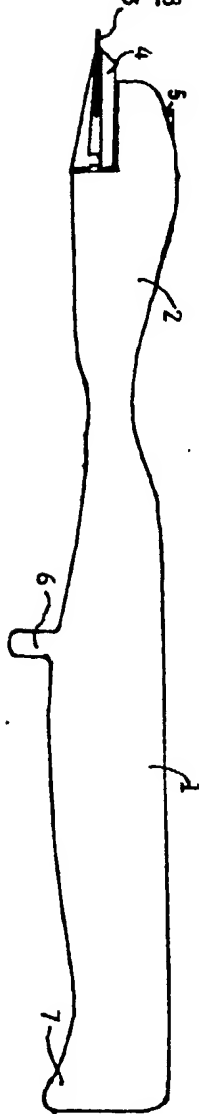
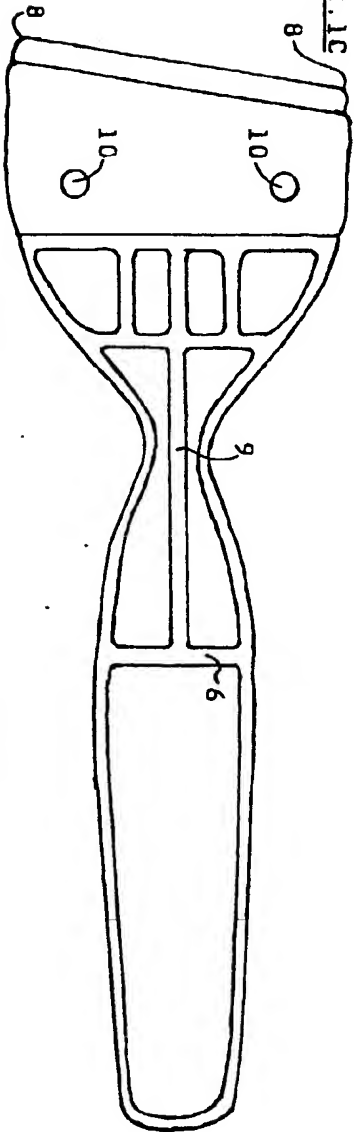


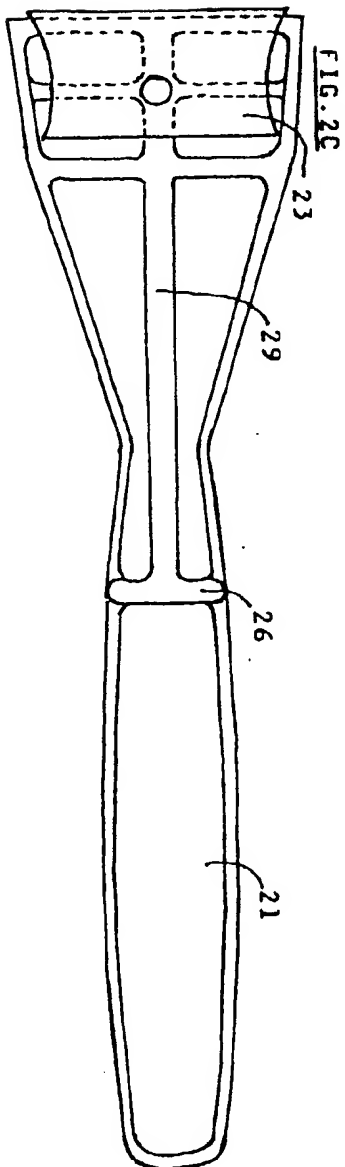
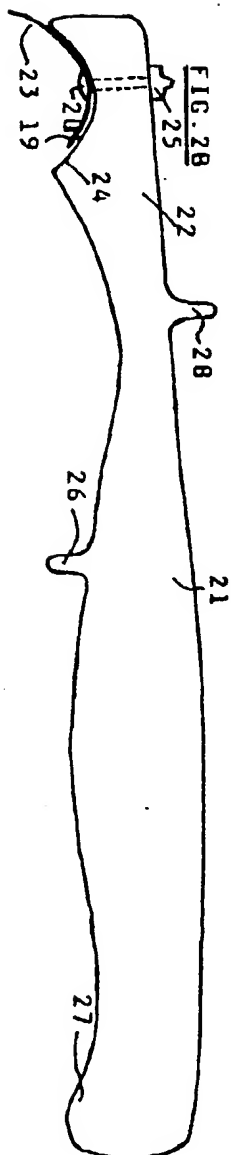
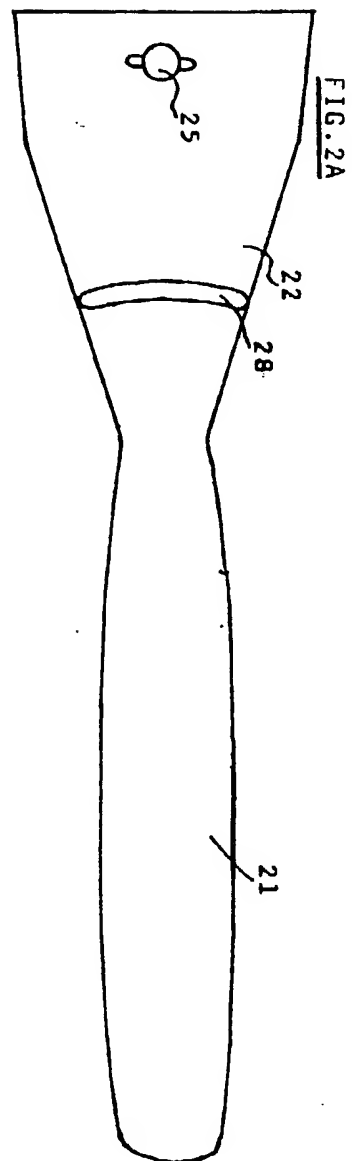
FIG. 1C





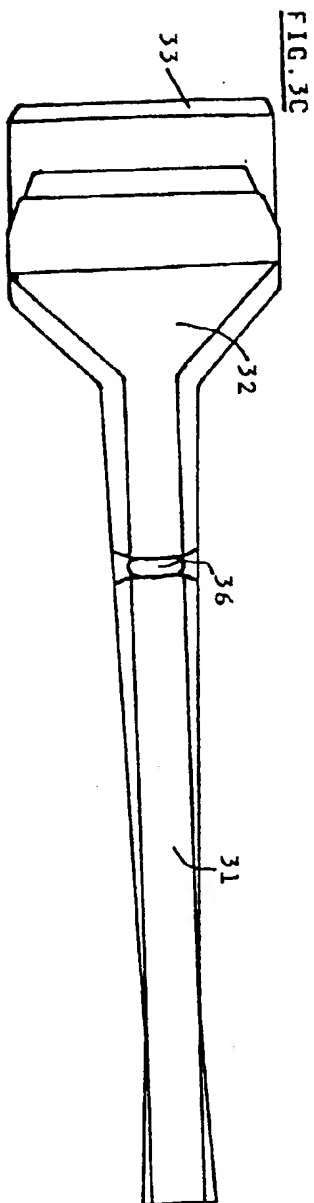
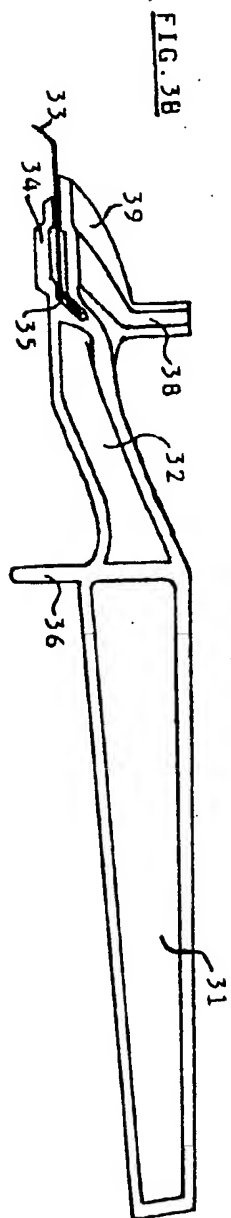
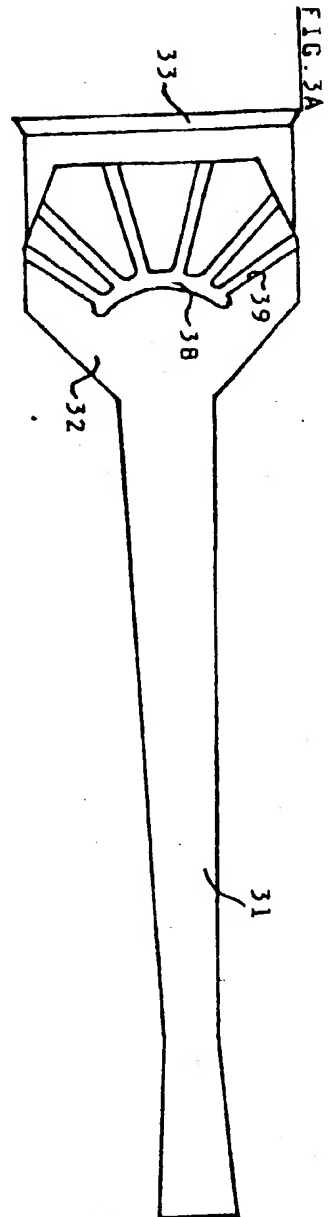
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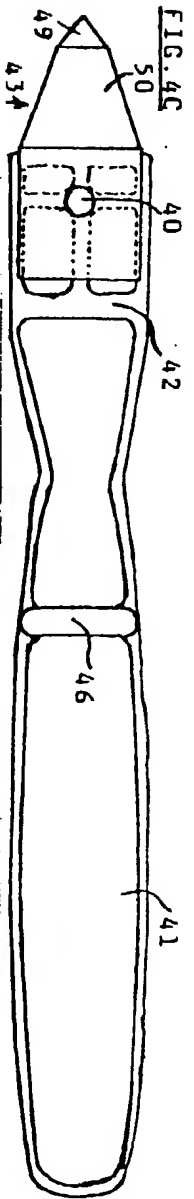
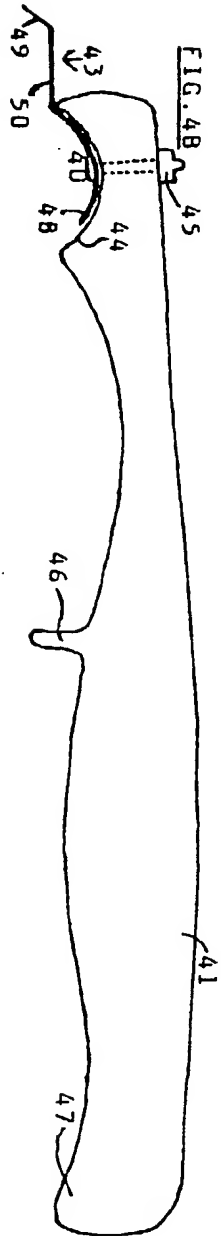
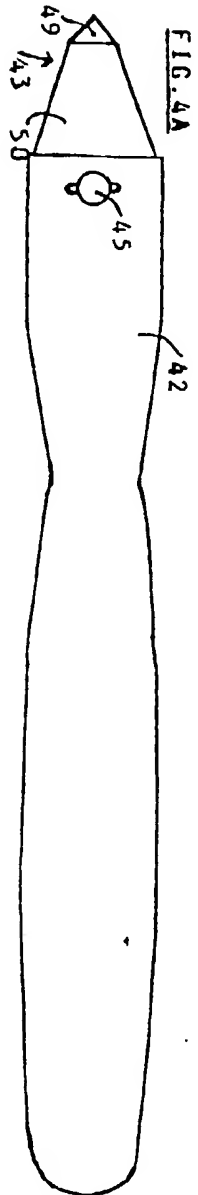
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# EUROPEAN SEARCH REPORT

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Application number

EP 79 20 0030

DOCUMENTS CONSIDERED TO BE RELEVANT			CLASSIFICATION OF THE APPLICATION (Int. Cl.)
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	
	<p>US - A - 3 688 401 (F. HARTMAN)</p> <p>* Column 2, lines 25-51 *</p> <p>--</p> <p>US - A - 2 624 111 (H.R. WEEKS)</p> <p>* Column 3, lines 5-39 *</p> <p>--</p> <p>FR - A - 969 582 (ETUDES ET APPLICATIONS FINANCIERES)</p> <p>--</p> <p>US - A - 2 306 083 (J.A. RIOUX)</p> <p>* Page 2, left-hand column, lines 19-30 *</p> <p>--</p> <p>US - A - 2 331 676 (M. HANSEN)</p> <p>* Page 1, left-hand column, line 50 - right-hand column, line 6 *</p> <p>--</p> <p>US - A - 3 173 206 (W.H. CHAMBERS)</p> <p>* Column 1, line 65 - column 2, line 4 *</p> <p>--</p> <p>US - A - 2 561 259 (B.B. YANZITO)</p> <p>* Column 1, lines 51-57 *</p> <p>--</p> <p>US - A - 2 238 957 (H.H. WARNER)</p>	<p>1,4,6,7,9</p> <p>1,3</p> <p>1,2</p> <p>4,6</p> <p>4,6,9</p> <p>5</p> <p>6</p> <p>9</p>	<p>B 44 D 3/16</p> <p>A 47 L 13/08</p> <p>TECHNICAL FIELDS SEARCHED (Int.Cl.)</p> <p>B 44 D 3/16</p> <p>B 44 C 7/02</p> <p>A 47 L 13/08</p> <p>A 47 L 13/022</p> <p>CATEGORY OF CITED DOCUMENTS</p> <p>X: particularly relevant</p> <p>A: technological background</p> <p>O: non-written disclosure</p> <p>P: intermediate document</p> <p>T: theory or principle underlying the invention</p> <p>E: conflicting application</p> <p>D: document cited in the application</p> <p>L: citation for other reasons</p> <p>8: member of the same patent family;</p> <p>corresponding document</p>
<p>The present search report has been drawn up for all claims</p>			
Place of search	Date of completion of the search	Examiner	
The Hague	19-04-1979	FRIDEN	



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# EUROPEAN SEARCH REPORT

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Application number

EP 79 20 0030

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DOCUMENTS CONSIDERED TO BE RELEVANT			CLASSIFICATION OF THE APPLICATION (Int. Cl.)
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	
	<p>* Page 1, left-hand column, line 49 - right-hand column, line 7 *</p> <p>---</p> <p><u>US - A - 1 978 091 (N. KUNDEBAGIAN)</u> 9</p> <p>* Page 1, right-hand column, line 59 - page 2, left-hand column, line 19 *</p> <p>---</p>		
A	<u>FR - A - 2 168 688 (SOCIETE NOUVELLE DES ETABLISSEMENTS JARDIN)</u>		TECHNICAL FIELDS SEARCHED (Int. Cl.)
A	<u>DE - C - 485 175 (K. GROER)</u>		
A	<u>DE - C - 431 020 (A. GREENWOOD)</u>		
A	<u>CH - A - 127 335 (J. BOO)</u>		
A	<u>DE - C - 205 102 (R. SCHORI)</u>		
	<p>----</p>		